

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.
SECTOR 1 — CHART INFORMATION

SECTOR 1

COAST OF LIBYA

Plan.—This sector describes the coast of Libya. The descriptive sequence is W to E from the border with Tunisia to the border with Egypt.

General Remarks

1.1 The greater part of this stretch of coast is only charted at small scale and inshore obstructions are shown only symbolically with many of them remaining uncharted. From Ras Ajdir, the coast extends E for 860 miles to the border with the Arab Republic of Egypt. Important ports along this coast include Tarabulus, Banghazi, and Tubruq.

Regulations.—See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for information concerning special regulations for Libyan waters.

The following are declared prohibited areas:

Zone A	32°52.8'N., 13°24.5'E. 32°57.7'N., 13°24.5'E. 32°57.7'N., 13°18.0'E. 32°53.8'N., 13°22.3'E.
Zone B	32°53.7'N., 13°20.6'E. 32°55.9'N., 13°18.0'E. 32°55.9'N., 13°15.0'E. 32°54.5'N., 13°15.0'E.
Zone C	31°09.0'N., 19°42.0'E. 31°09.0'N., 19°19.0'E. 31°56.0'N., 19°42.0'E. 31°56.0'N., 19°19.0'E.
Zone D	32°58.0'N., 13°06.0'E. 32°53.0'N., 13°06.0'E. 32°58.0'N., 12°48.0'E. 32°52.0'N., 12°44.0'E.

Caution.—Tunney nets may extend up to 6 miles offshore from many of the fishing harbors along the coast and constitute a hazard. A detailed description of these nets is given in Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Submarines exercise off the coasts described within this sector.

During winter, vessels anchoring in the roadsteads off the coast of Libya and working cargo by day are recommended to anchor farther out for the night as at that time of year there are frequent strong winds and occasional NW gales.

Special regulations are in effect for vessels entering Libyan-claimed territorial waters. See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for details.

Special Warnings are in effect for vessels calling at Libyan Ports. See Notice to Mariners No. 1 for details.

Ras Ajdir to Tarabulus

1.2 Ras Ajdir (33°10'N., 11°34'E.) is a low and inconspicuous point which is marked by a beacon. The boundary between Libya and Tunisia is situated in its vicinity.

The current from Ras Ajdir to Zuwarah is strong and sets SE close inshore.

Ras at Taljah (33°07'N., 11°41'E.), located 8 miles SE of Ras Ajdir, is the NW extremity of a low and narrow peninsula which forms the only unusual feature along this coast. Shoals extend up to 6 miles E and N from both of the above points and some are visible in clear weather. A light is shown from a building situated 2 miles ESE of Rasat Taljah.

Abu Kammash Industrial Complex (33°04'N., 11°49'E.) is situated 7 miles SE of Rasat Taljah. A jetty, suitable for coasters, extends 0.4 mile N from the shore fronting the complex and has a depth of 6.7m at its head.

The complex can be easily identified from seaward by two white tanks, one larger than the other, and by two minarets standing on a hill, 21m high, 1 mile E.

A fairway channel, dredged to a depth of 7.9m over a width of 150m and marked by buoys which are liable to be washed away, extends about 1.8 miles SW from the fairway to a turning basin off the jetty. Permission to use this jetty should be obtained from Zuwarah (described below), giving 24 hours notice so that a local pilot can be made available.

Caution.—Bouri Oilfield (33°54'N., 12°39'E.), consisting of two production platforms and an offshore loading platform (SPM), lies about 70 miles NE of Rasat Taljah. All vessels waiting to load should remain 2 miles S of the SPM. Racons are situated at all the platforms. It is reported that a storage tanker is moored to the SPM and vessels up to 150,000 dwt may load alongside it.

1.3 Zuwarah Marina (32°56'N., 12°07'E.) (World Port Index No. 45350), a village, lies 24 miles SE of Rasat Taljah and is fronted by a small harbor. This harbor has depths of 4 to 5m and is formed by two moles. Shoals and irregular depths lie in the approaches and it is only entered by small vessels with local knowledge. A light is shown from a framework structure standing on a peninsula close W of the harbor.

The town of Zuwarah stands 1.5 miles NW of the harbor and can be identified by a palm oasis and three conspicuous water towers. Anchorage is available in an area, 1 mile in radius, centered about 3 miles NE of the light. A dangerous wreck lies about 4.5 miles N of the harbor.

Marsa Zuwaghah, a small indentation, lies 18 miles ESE of Zuwarah and is mostly used by fishing vessels. Fish canneries, painted white, and four conspicuous chimneys stand on the shore. Marsa Sabrathah, another small indentation, lies 2 miles E of Marsa Zuwaghah and is used by fishing vessels and small craft. The ruins of a prominent amphitheater stand on the

shore. Anchorage is obtainable by small vessels in depths of 5 to 7m, rocky bottom, within these two indentations.

Zawia Oil Terminal (32°48'N., 12°43'E.) (World Port Index No. 45335) lies 10 miles E of Marsa Sabrathah and fronts the shore close to the town of Sidi Nasser. A refinery, with two conspicuous burn-off flares and a water tank, are situated in this vicinity. A prominent wind motor stands 1 mile E of the town. A small jetty fronts the refinery.

The offshore facilities include the following:

1. No. 1 Berth, lying 0.8 mile NNE of the jetty, consists of an SPM (SALM) moored in a depth of 22m. Vessels up to 100,000 dwt and 17m draft can be accommodated.

2. No. 2 Berth, lying 1.5 miles ENE of the jetty, consists of a SPM (CBM) moored in a depth of 21m. Vessels up to 25,000 dwt and 10m draft can be accommodated.

3. No. 3 Berth, lying 1.2 miles NE of the jetty, consists of an SPM (SALM) moored in a depth of 24m. Vessels up to 140,000 dwt and 19m draft can be accommodated.

Pilotage is compulsory from the anchorage to the berths. The terminal can be contacted by VHF and vessels should do so as soon as possible upon approaching. Vessels awaiting a berth should anchor in a depth of 25m, sand over rock, about 1 mile N of the loading berths. The berths are in the open sea and vessels must have their main engines ready for immediate use at all times. Operations may be interrupted by strong winds, particularly during the winter.

Zanzur (Janzur) (32°50'N., 13°04'E.), a settlement, is situated 20 miles ENE of Sidi Nasser. The white buildings and chimneys of a tuna cannery stand near the shore and are prominent. Two radio masts stand close to the coast, 1.5 miles ENE of Zanzur.

The coast between Zanzur and Ras el Ahmar, 6 miles ENE, is rugged and uncultivated. A prominent radio mast stands 12 miles S of Ras el Ahmar.

Caution.—Several submarine cables, which may best be seen on the chart, extend seaward from a point on the coast, 1 mile ENE of Ras el Ahmar.

Tarabulus (32°54'N., 13°11'E.)

World Port Index No. 45330

1.4 Tarabulus, the principal port in Libya, lies in a flat coastal oasis. The old part of the city stands on a rocky promontory and is surrounded by a wall. The harbor fronts the NE side of the city and is protected by breakwaters.

Winds—Weather.—In winter, the prevailing winds are from the N and NW which occasionally attain gale force. During summer, the prevailing winds are from the NE. During spring and autumn, a hot dust-laden wind from the S may limit visibility and interrupt port operations. With a sudden squall or NW sea, entering the harbor may be difficult. Strong NW winds are reported to raise heavy seas in the entrance.

Refraction (Fata Morgana) is frequent and errors in estimating distances are possible. Mist or haze is common, especially with winds from between the E to S, and visibility may be reduced. With winds from the S and SW, the coast appears considerably nearer, while the opposite occurs with winds from the E and SE.

Tides—Currents.—The tidal rise is slight, being only about 0.5m at springs. The water level in the harbor may be raised by as much as 1m by strong N winds, or by the Marrobbio which consists of a series of waves or surges.

The current off the port sets SE with a rate of 0.5 to 1 knot. Because of the prevailing NE winds during the summer, a set in the opposite direction may be experienced. A surface current associated with the Marrobbio may set across or through the harbor entrance. This current may be very strong and has been reported to attain a rate of over 3 knots, causing eddies and rips. It does not set in one direction for more than 30 minutes after which it may set strongly in the opposite direction and then gradually dissipate.

Depths—Limitations.—It has been reported that the approach and entrance channels are dredged to a depth of 12m over a minimum width of 150m.

The harbor is divided into inner and outer parts by two moles. Small naval bases lie in the SE corner of the outer harbor and the SE corner of the inner harbor. Several mooring buoys are situated within the harbor.

There is 4,100m of total commercial berthage with depths of 3 to 12m alongside. There are facilities for ro-ro, container, bulk, and tanker vessels. Vessels of any size up to 8.3m draft can be accommodated.

Aspect.—From seaward, the white buildings and minarets of the city stand out clearly against the green of the surroundings.

Spanish Mole extends 1 mile NE from the N part of the town and forms the N side of the harbor. The N breakwater extends 1.1 miles NE from the NE end of Spanish Mole and then turns SE to form the entrance. The S breakwater extends 0.6 mile NNW from the S shore of the harbor.

A main light is shown a prominent structure, 27m high, standing near the root of the N breakwater.



THE CASTLE, TARABULUS

Conspicuous landmarks include a water tower, 30m high, standing 0.3 mile SW of the light; the castle, with two flagstaffs, situated 0.5 mile SSE of the light; the belfry of the church of Santa Maria degli Angeli standing 0.4 mile S of the light; the cathedral, with its octagonal dome and belfry, situated 1 mile SE of the light; and the square tower of the Hotel Uaddan standing 0.9 mile SE of the light.

Ras Az Zur Reef is composed of small islets and rocks and fronts the N side of Spanish Mole and the S part of the N breakwater.

Kaliyusha Reef (Caliuscia Bank), with a least depth of 2.7m, extends between 1.5 miles and 3.7 miles ENE of the main light. This reef breaks in strong N winds and a dangerous wreck lies on its E part.

The approach channel, which leads S through Kaliyusha Reef, is marked by lighted buoys and beacons. The approach

and entrance fairways are indicated by lighted ranges which may best be seen on the chart.

A radiobeacon is situated 1.5 miles ESE of the main light.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and board vessels about 0.5 mile N of the entrance to the approach channel. Vessels should send an ETA 12 hours in advance. See General Remarks.

Signals.—The following traffic signals may be displayed:

1. Black cone, point up—Port open to vessels entering.
2. Two black cones, bases together—Port open to vessels leaving.
3. Three black balls, vertical—Port closed.
4. Red flag or red flashing light—Port closed due to bad weather.

Anchorage.—A designated anchorage area, the limits of which are shown on the chart, lies centered 2 miles NW of the head of the N breakwater. The holding ground in this vicinity is reported to be good.

Caution.—Several mined areas lie in the approaches to Tarabulus and may best be seen on the chart.

Sudden wind squalls, especially between October and February, can make anchoring in the harbor very hazardous.

Due to the existence of submarine cables, an anchoring prohibited area lies N of the N breakwater and may best be seen on the chart.

Construction is being carried out within the port.

Tarabulus to Khalij Surt

1.5 Ras Tajura (32°54'N., 13°24'E.), a low point, is located 9 miles E of the E breakwater at Tarabulus and is marked by a light. The coast between is sandy and numerous rocks extend up to 0.5 mile offshore along the first 6 miles.

A prominent group of five small oil tanks stands on the summit of a low and brown cliff, 2.2 miles ENE of the SE breakwater at Tarabulus. A water tower stands 0.5 mile SE of this group of tanks and an aeronautical light is occasionally shown from it.

Ockba Ben-Nafah Airfield (Wheelus Airfield) is situated in the vicinity of this water tank and a dark grey hangar building is situated near it. A control tower stands 0.3 mile S of the water tank and a similar water tower stands 0.8 mile E.

A conspicuous tower stands 5.5 miles E of the SE breakwater at Tarabulus and is situated among oil installations. A submarine pipeline extends 1 mile NNE from the shore fronting this tower to an offshore tanker berth. This berth consists of mooring buoys and lies in a depth of 16m. The approach to the berth is indicated by range beacons which may best be seen on the chart.

Caution.—A restricted area, which may best be seen on the chart, lies in the vicinity of the offshore tanker berth.

Mined areas, which may best be seen on the chart, front the coast in places between Tarabulus and Ras Tajura.

A prohibited area, which may best be seen on the chart, fronts the coast to the E of Tarabulus. See General Remarks.

Ras al Hallab (32°48'N., 13°48'E.), marked by a light, is located 2 miles ESE of Ras Tajura and is formed by rocky promontory, 13m high.

Trig el Gefara, a prominent disused fort, stands 1.5 miles SSE of Ras Tajura and a conspicuous wind pump is situated 3.2 miles SE of it.

Caution.—Due to the existence of submarine cables, an anchoring and fishing prohibited area, which may best be seen on the chart, extends up to 9 miles NE from a point on the coast, 3 miles SE of Ras Tajura.

Ras al Misann (32°41'N., 14°14'E.), a low and rocky point, is located 23 miles ESE of Ras al Hallab and is fronted by a reef. Anchorage, with good holding ground and sheltered from NW winds, can be taken in depths of 5 to 7m, about 0.2 mile S of the reef.

Qasr Al Jifarah, a prominent building, stands 7 miles SSE of Ras al Hallab.

Bintal Rock lies close offshore, 10.2 miles SE of Ras al Hallab. This rock has a pointed top and is prominent from seaward. Sidi Abd al Ghani, a prominent marabout, stands 3.8 miles SSW of Bintal Rock.

A radio mast stands 3 miles S of Ras al Misann. Gasr al Misann, a massive isolated fort, is situated close SSW of the mast.

Ras al Wazif (32°40'N., 14°15'E.) is located 2.7 miles SE of Ras al Misann. A main light is shown from a tower, 19m high, standing on this point. Al Khums, a small town, is situated within Ras al Wazif and is backed by hills. A prominent minaret stands 0.3 mile S of the light. The town is fronted by a small boat harbor. Anchorage can be taken in a depth of 10m, rocky bottom, about 0.4 mile E of the light.

From Al Khums to Qasr Ahmad, the current sets SW at a rate of from 0.2 to 4 knots, being influenced by the NW winds at the latter point. In summer, the current is weak and sets NW and N at 0.25 to 1 knot.

Sidi Barku, a low and conical hill, stands 2.5 miles SE of Ras al Wazif and is surmounted by a ruined fort.

Homs Power Station (32°38'N., 14°20'E.) is located 1.5 miles SE of Sidi Barcu and may be easily identified by four chimneys, 100m high.

A pier projects 1,500m NNE from the shore fronting the power station and has a depth of 16m at its head. The berth at the head of this pier is flanked by dolphins and fronted by mooring buoys. It was reported (1989) that tankers with drafts up to 13m can be handled.

Vessels approaching the pier are required to contact Tarabulus Port Control. A local pilot is provided from Al Khums to assist in the berthing operation which is carried out only in daylight.

Sidi Muftah, a conspicuous white-domed building backed by palms, stands 7 miles SE of Al Khums.



SIDI MUFTAH MARABOUT

Al Qalb (32°30'N., 14°34'E.), a high and conical hill, stands 10.5 miles SE of Sidi Miftah. A main light (Marsa Zlitan) is shown from a tower, 5m high, standing on this hill.

A conspicuous radio mast, 76m high, stands 0.7 mile S of the light. Unsheltered and temporary anchorage can be taken in a depth of 10m about 0.5 mile NNE of the light.

Ras al Barq (Ras Zorug) (32°22'N., 15°13'E.), a low and rocky point, is located 34 miles ESE of Al Qalb. The coast between is fronted by reefs which extend up to 0.4 mile offshore in places and several stranded and dangerous wrecks lie along it. A main light is shown from a structure, 8m high, standing on the point. The town of Qasr Ahmad (Misurata Marina) is situated close S of the point.

Khalij Surt (Gulf of Sidra)

1.6 Khalij Surt (32°00'N., 18°00'E.), an extensive gulf, is entered between Qasr Ahmad (Misurata Marina) and Banghazi, about 250 miles E. Several important oil terminals are situated on the shores of the gulf.

The prevailing winds in the gulf are from the NW and NE, and they often raise heavy swells which pound the shores of the gulf. The ghibli, a hot and dry wind from the desert, blows from the S and SE into the gulf and often carries sand and dust. This wind blows more frequent in spring and autumn, and may last from a few hours to several days.

The prevailing current in the gulf sets SW, at a rate of 0.25 to 0.75 knot, depending on the wind force from the NW or NE. During the winter, the current sets SE during the NW wind; in summer, the current sets NW.

The current appears to form a clockwise gyre in the E part of Khalij Surt, and flows S and W along the E and S shores of the gulf. It turns N when E of Surt, where it again joins the main E flow along the Libyan coast to Egypt.

Qasr Ahmad (32°22'N., 15°13'E.) (World Port Index No. 45320), a small port, lies close S of Ras al Barq and is protected by breakwaters.

Tides—Currents.—During the winter, the current caused by the prevailing NW winds sets SE, at a rate of 1 to 4 knots. During the remainder of the year, the prevailing SW wind causes a NW current.

Depths—Limitations.—The entrance channel is about 150m wide and is dredged to a depth of 13m. A turning basin, 470m wide, lies close inside the entrance and is dredged to a depth of 12m. There is 1,125m of total commercial quayage with berths of 185 to 200m long and depths of 11 to 12m alongside. There are facilities for general cargo, tanker, bulk, and ro-ro vessels. Vessels up to 30,000 dwt and 11m draft can be handled.

In addition, a quay fronts a steel works which is situated 1 mile SE of the main harbor. It is 350m long and has a depth of 15m alongside.

Aspect.—The town was formerly enclosed by a wall, but only parts of it now remain. Several prominent silos stand on the E breakwater and some conspicuous dish aerials of a radio station stand near the root. A prominent chimney stands at the power station situated 3 miles SSE of the light on Ras al Barq. A prominent radio mast stands 7.6 miles WNW of the light.

The harbor should be approached from a position about 3 miles E of the entrance. The fairway channel is indicated by a lighted range and marked by lighted buoys.

Pilotage.—Pilotage is compulsory and is available from 0800-2000 LT (except Fridays). Vessels should send an ETA 12 hours in advance. Pilots can be contacted by VHF and board about 1 mile off harbor entrance.

Anchorage.—Vessels can take anchorage in a depth of 13m about 1 mile offshore, E of the main light.

Al Bu'ayrat (31°24'N., 15°44'E.), a nearly deserted village, is situated 63 miles SE of Qasr Ahmad and can be identified by a white fort and a white domed monument. The coast between is fronted by several dangerous wrecks. Sheltered anchorage may be obtained in a depth 6m about 1.2 miles offshore, NE of the monument.

In the vicinity of Al Bu'ayrat, the current is influenced by the wind. In winter, with strong NW winds, the current sets SE, at a rate of 1 to 2 knots. In summer, the current generally sets NW, at a rate of 0.25 to 0.5 knot.

Surt (31°13'N., 16°35'E.), a small and silted harbor, lies 49 miles ESE of Al Bu'ayrat and is infrequently used. The town can be identified by a minaret, a ruined castle, several radio masts, and a fort, all of which are prominent from up to 10 miles seaward. Anchorage can be taken in a depth of 12m, sand, about 0.7 mile offshore, NNW of the castle.

A main light is shown from a water tower standing close NW of the fort.

Ras as Sultan (31°04'N., 17°24'E.) is located 42 miles ESE of Surt. A reef extends up to about 1.5 miles E of this point. Small vessels can anchor in a depth of 9m in the lee of the point and the reef. A large white house is reported to stand 4.7 miles SSE of the point. A prominent red sand dune stands 17 miles ESE of the point.

Caution.—Numerous oil rigs, platforms, and associated service vessels may be encountered within about 23 miles of the coast between Ras es Sultan and As Sidr (Es Sider), 57 miles ESE.

Jabal al Mudawwar (30°50'N., 17°43'E.), 121m high, is a flat topped mountain which is conspicuous from seaward.

Ras al 'Uwayja (30°55'N., 17°52'E.) is a high, rocky, and prominent cape. A reef, with a least depth of 2.7m, extends 3.2 miles ESE from this cape. Anchorage can be taken in depths of 9 to 14m, within the bight entered close SE of the cape. Local knowledge is required.

As Sidr (30°38'N., 18°22'E.)

World Port Index No. 45297

1.7 As Sidr is an open roadstead with an offshore marine oil terminal. Several buildings and a pumping station are situated near the shore and are fronted by a boat harbor which is used by terminal officials.

Tides—Currents.—Tides are negligible, being only 0.3m at springs.

The currents are wind induced and are predominantly from the SE with occasional maximum rates of up to 2 knots.

Depths—Limitations.—There are four offshore loading terminals which are connected to the pumping station by submarine pipelines. Nos. 1 and 3 Berths consist of several mooring buoys. Nos. 4 and 5 Berths consist of an SBM.

No. 1 Berth lies 1.8 miles NE of the pumping station and can handle vessels up to 281m in length and 15.54m draft.

No. 3 Berth lies 1.8 miles NNE of the pumping station and can handle vessels up to 290m in length and 15.54m draft.

No. 4 Berth lies 2.5 miles NNE of the pumping station and can handle vessels up to 351m in length and 19.05m draft.

No. 5 Berth lies 4 miles NE of the pumping station and can handle vessels up to 355m in length and 22.25m draft.

Aspect.—A conspicuous water tower, 20m high, and a conspicuous radio tower stand in the vicinity of the pumping station.

An aeronautical radiobeacon is situated 0.4 mile SSE of the water tower; a conspicuous group of oil tanks stands 3.6 miles WSW of the water tank; and a prominent radio mast, 50m high, stands 0.3 mile NW of the oil tanks.

The offshore berths are marked by lighted buoys and the approach is indicated by a lighted range which may best be seen on the chart.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and board about 4 miles NNE of the terminal. Vessels should send an ETA 72, 24, 12, and 4 hours in advance.

It is reported that Mooring Masters board vessels in the vicinity of the anchorage area and remain on board until the vessels depart the loading berths. They advise vessels regarding communications, mooring, unmooring, connecting hoses, disconnecting hoses, and all other relevant operations.

Anchorage.—The recommended anchorage area, which may best be seen on the chart, lies centered 4.5 miles NNE of the conspicuous water tower and has depths of 27 to 33m, sand.

Caution.—Vessels approaching the anchorage area from the N or NW should disregard the terminal ranges and mooring buoy marker lights which are shown intermittently and are only for the use of the mooring masters.

VLCCs are not berthed at night.

An anchorage prohibited area lies in the vicinity of the terminals and may best be seen on the chart.

The approaches to the terminal offshore berths are clear of known dangers; however, rigs, platforms, and vessels involved in oil and gas drilling operations may be encountered up to several miles offshore between this terminal and Marsa al Burayqah (Marsa el Brega), 64 miles ESE.

Ras Lanuf (30°31'N., 18°34'E.)

World Port Index No. 45296

1.8 Ras Lanuf, a low and sandy point, is located 13 miles SE of As Sidr and is fronted by an offshore oil terminal. In addition, a harbor, which is protected by breakwaters, lies within the point and provides alongside gas and oil loading facilities.

Tides—Currents.—Tides are negligible, being only 0.3m at springs.

The currents are wind induced and are predominantly from the SE with occasional maximum rates of up to 2 knots.

Depths—Limitations.—The harbor approach channel is dredged to a depth of 15.5m. Three finger jetties are situated in the harbor and provide six oil berths with depths of 11.5 to 14m alongside. Vessels up to 50,000 dwt, 250m in length, and 12.5m draft can be accommodated. In addition, there is a cargo quay, 177m long, which has a depth of 11m alongside. Vessels up to 20,000 dwt, 177m in length, and 9.5m draft can be accommodated.

The offshore terminal consists of four berths, each connected to the shore by a submarine pipeline. Nos. 1, 2, and 3 Berths consist of several mooring buoys. No. 4 Berth consists of an SBM.

Nos. 1, 2, and 3 Berths have depths of 21 to 27m and can handle vessels up to 130,000 dwt.

No. 4 Berth lies in a depth of 30m and can handle vessels up to 265,000 dwt and 29m draft.

Aspect.—A conspicuous water tower, from which a light is shown, stands 1.5 miles W of Ras Lanuf. Several oil tanks are situated 4 miles SW of the water tower and are prominent from seaward. Marble Arch, a prominent monument, spans the coastal highway, 3.5 miles S of Ras Lanuf.

An outer lighted buoy, moored about 1.7 miles E of the head of the N breakwater, marks the seaward entrance of the harbor approach channel. A lighted range, which may best be seen on the chart, indicates the fairway leading through the harbor entrance. An outer lighted buoy, moored 3 miles N of Ras Lanuf, marks the approach to the offshore terminal.

Pilotage.—Pilotage is compulsory. Vessels should send an ETA 72, 24, and 12 hours in advance with a confirmation message 4 hours before arrival. Vessels should also report any change to their ETA of over 1 hour. Pilots can be contacted by VHF and board vessels proceeding to the harbor in the vicinity of the outer lighted buoy or at the anchorage. Mooring Masters, also serving as pilots, will board vessels proceeding to the offshore terminal close NW of the berths or at the anchorage.

After securing the vessel at a berth, the Mooring Master will remain aboard in an advisory capacity until departure from the port.

Anchorage.—A designated anchorage area for vessels proceeding to the harbor, which may best be seen on the chart, lies centered 2.5 miles NE of the harbor entrance. A designated anchorage area for vessels proceeding to the offshore terminal, which may best be seen on the chart, lies centered 2.8 miles N of the harbor entrance. The anchorages have depths of 30 to 31m, sand, good holding ground.

Caution.—Navigation and anchoring are prohibited, except for vessels using the port facilities or the offshore terminal, within an area which may best be seen on the chart, and extends up to 3.5 miles from the shore.

Rigs, platforms, and vessels involved in oil and gas drilling operations may be encountered in the approaches to Ras Lanuf.

1.9 Ras al Ali (30°23'N., 18°48'E.) is a low point which is fronted by shoals. An old jetty, 150m long, projects from the point and has a depth of 3.6m alongside its head (1981). Small craft with local knowledge can find partly sheltered anchorage in depths of 6 to 9m SE of the point.

The barren coast from this point to the head of Khalij Surt is backed by occasional ridges.

Al Uqaylah (30°16'N., 19°12'E.) can be identified by several reddish buildings which have the appearance of forts and stand 0.5 mile inland. One of these buildings is encircled by a wall on which there is a lookout tower. A house, painted in black and white checkers, stands near the beach and the ruins of a lighthouse are situated close to it. Anchorage can be taken during daylight N of Al Uqaylah in depths of 16 to 18m, good holding ground, about 2 miles offshore.

Jazirat Bu Shu'ayfah, an above-water rock, lies about 1.3 miles offshore, 4.2 miles NW of Al Uqaylah. It is dark and can be easily identified against the yellow background of the sand. Anchorage can be taken in depths of 10 to 13m, about 1 mile SE of this rock.

Khashm Aritu (Ras al Magdar) (30°26'N., 19°38'E.), a low point, is fronted by foul ground and depths of less than 10m lie up to 0.5 mile N of it.

El Magdar Reef (30°27'N., 19°37'E.) lies centered about 1 mile NW of Khashm Aritu. It is extensive, rocky, and has rocks awash.

Marsa al Burayqah (30°25'N., 19°36'E.)

World Port Index No. 45295

1.10 Marsa al Burayqah, a bay, lies 22 miles ENE of Al Uqaylah and is entered between Khashm Aritu (Ras al Magdar) and a point, 3 miles SW. An important oil terminal is situated in the SW part of the bay and consists of a harbor, protected by breakwaters, and several offshore berths.

Depths—Limitations.—The offshore terminal formerly consisted of six berths connected to the shore by submarine pipelines.

Nos. 1, 3, and 4 Berths are now out of service, but some of the ground chains, mooring buoys clumps, and pipelines are still in position.

No. 2 Berth consists of several mooring buoys and lies in a depth of 13.4m. Vessels up to 65,000 dwt, 244m in length, and 12.8m draft can be handled.

No. 5 Berth is situated 2 miles NNW of the radar tower and consists of an SBM. It lies in a depth of 37m and can handle vessels up to 300,000 dwt.

No. 6 Berth is situated 2 miles NW of the radar tower and consists of an SBM. It lies in a depth of 42m and can handle vessels up to 300,000 dwt.

The harbor can handle general cargo, ro-ro, bulk, gas, and tanker vessels. There is a general cargo quay, 390m long, with a depth of 10m alongside; a bulk berth, 200m long, with a depth of 9.2m alongside; two gas berths, 320m and 333m long, with a depth of 11.3m alongside; and two refined product berths, 334m and 341m long, with a depth of 12.2m alongside.

Generally, general cargo vessels up to 15,000 dwt and 9.2m draft can be accommodated and tankers up to 30,000 dwt and 10m draft can be accommodated.

Aspect.—Several conspicuous burn-off flares are situated in the vicinity of the oil refinery at the SW side of the harbor and can be seen from 25 miles seaward. A prominent radar tower, marked by a light, stands near the root of the W breakwater. A

conspicuous red water tower, with the ruins of a fort close NW of it, stands 0.6 mile SW of the radar tower.

An outer approach lighted buoy, moored about 2.7 miles NNW of the harbor entrance, marks the seaward entrance of the harbor approach channel. The fairway of this channel is marked by lighted buoys and is indicated by a lighted range which may best be seen on the chart.

Other lighted ranges indicate the approaches to the offshore loading berths and also may best be seen on the chart.

Pilotage.—Pilotage is compulsory. Vessels should send an ETA 72, 48, and 24 hours in advance. Pilots can be contacted by VHF and board in the vicinity of the outer approach lighted buoy.

Mooring Masters, also serving as pilots, will board vessels proceeding to the offshore terminal berths. After securing the vessel at a berth, the Mooring Master will remain aboard in an advisory capacity until departure from the port.

Anchorage.—Vessels should anchor in a depth of 36m between the NE and E about 0.5 mile from the outer approach lighted buoy, but staying clear of the E lighted range.

Caution.—A foul area, in which numerous rocks awash lie, extends up to 0.5 mile N from the vicinity of the root of the W breakwater. The coastal bank, with depths of less than 10m, extends up to 0.5 mile N of the N extremity of this foul area and is marked by a lighted buoy.

Navigation is prohibited, except for vessels using the port facilities or the offshore terminal, within a restricted area which may best be seen on the chart and extends up to 2 miles from the shore.

1.11 **Jabal Lamaresc** (30°35'N., 19°51'E.), 62m high, is prominent and has a truncated summit. This hill stands 1 mile inland, 17 miles NE of Marsa al Burayqah.

Ez Zueitina (30°57'N., 20°07'E.), a coastal village, can be identified by several conspicuous buildings and a large white fortification with a tall watch tower. An old and disused barracks stands 4 miles SSW of the village and is prominent. Three flares and three white tanks are reported to stand 0.8 mile NE and 0.2 mile N, respectively, of the barracks.

Anchorage can be taken in depths of 12 to 14m, sand, good holding ground, about 1.2 miles WNW of the village. A dangerous wreck is reported to lie about 0.7 mile WNW of the village.

Tre Scogli (30°54'N., 20°03'E.), a conspicuous group of rocks, with some above-water, lies 1 mile offshore, 5 miles SW of Ez Zueitina. Scoglio Sud, the S rock, is marked by a light (Waffeya). Trinity Shoal, a rock awash, lies about 0.6 mile SW of this light.

A tanker hulk, which is used as a workshop by the nearby oil terminal, fronts the shore, 1 mile SE of Scoglio Sud.

Scoglio Nord, a group of rocks, lies about 1.4 miles offshore, 2.5 miles NNE of Scoglio Sud.

Caution.—Between Marsa al Burayqah and Ez Zueitina, several reefs, shoals, and islets lie up to almost 5 miles offshore. The outermost include North Lamaresk Reef, with rocks awash, which lies 4.8 miles offshore, 5.8 miles NNW of Jabal Lamaresc; Hericha Rock, above-water, which lies 6.7 miles NE of North Lamaresk Reef; and Gharah Islet, surrounded by shoals, which lies 2.5 miles NE of Hericha Rock.

Az Zuwaytinah (30°51'N., 20°03'E.)

World Port Index No. 45290

1.12 Az Zuwaytinah (Ez Zueitina) Terminal, which consists of several offshore oil loading berths and facilities for liquefied petroleum gas, lies close S of Tre Scogli.

Depths—Limitations.—The offshore terminal consists of five berths which are connected to the shore by submarine pipeline. Alpha, Charlie, and Echo Berths each consist of an SBM. Bravo and Delta Berths each consist of several mooring buoys (CBM).

Alpha Berth is reported (1994) to be out of service.

Bravo Berth lies in a depth of 21.9m and can handle vessels up to 150,000 dwt.

Charlie Berth lies in a depth of 30.5m and can handle vessels up to 275,000 dwt.

Delta Berth lies in a depth of 20m and can handle vessels up to 110,000 dwt.

Echo Berth lies in a depth of 25.3m and can handle vessels up to 150,000 dwt.

A pier, which shelters a small boat harbor, extends 0.5 mile from the shore in the vicinity of Tre Scogli and has an LPG berth at its head. This berth consists of mooring dolphins and can accommodate vessels up to 213m in length and 8.7m draft.

Aspect.—A prominent radio tower, marked by a light, stands at the terminal, 4.2 miles S of Scoglio Sud (Waffeya) Light. Several conspicuous oil tanks are situated close S of it.

Sidi Alib, a conspicuous tomb, stands 0.7 miles NE of the radio mast.

The approach channel, which leads to the LPG Berth, lies between Tre Scogli and Trinity Shoal, and is marked by a lighted buoy and indicated by a lighted range which may best be seen on the chart.

A lightfloat (Zulu) is moored about 6.7 miles NNW of the radio tower and marks the outer approaches.

Pilotage.—Pilotage is compulsory. Vessels should send an ETA 72, 48, and 24 hours in advance and the contact the pilots by VHF when within range. Mooring Masters, serving as pilots, will board vessels in the vicinity of the outer lightfloat or at the anchorage. They will remain aboard until the vessel departs from the port and advise in the loading operations.

Anchorage.—A designated anchorage area, which may best be seen on the chart, lies centered 2.2 miles WNW of Scoglio Sud (Waffeya) Light.

Caution.—During the winter, vessels at the offshore loading berths and the anchorage may be forced to leave by sudden strong winds and heavy swells.

A shoal, with a least depth of 7.3m, lies about 5.5 miles NW of the terminal radio mast and is marked by a lightfloat.

1.13 Ras Kurkurah (31°28'N., 20°00'E.), a low and rocky point, forms the N end of a small bay and is fronted by above-water rocks which extend up to 0.2 mile seaward. It is surmounted by the low ruins of a castle. Sheltered anchorage can be taken in a depth of 6m, about 0.8 mile SE of the point.

Bu Zaribah, a fort in ruins, is situated 10 miles N of Ras Kurkurah and is conspicuous from seaward.

Bernice Reef (32°01'N., 19°56'E.), a rock awash, lies 1.2 miles offshore at the NW extremity of a rocky spit with depths

of less than 5m. A rocky patch, with a least depth of 3.7m, lies about 3.2 miles NE of Bernice Reef, and from a point on the coast 1.25 miles E of this patch a spit with depths of less than 3.7m extends 1 mile N.

Caution.—It is reported that winds and currents between Az Zuwaytinah and Banghazi tend to set vessels onshore.

Several wrecks, some dangerous, lie up to 3 miles offshore between Az Zuwaytinah and Banghazi and may best be seen on the chart.

Banghazi (32°07'N., 20°03'E.)

World Port Index No. 45280

1.14 Banghazi is a commercial center and summer resort. The town contains many large and modern buildings and is situated on a low point at the E entrance to Khalij Surt (Gulf of Sidra). The port is protected by breakwaters and is divided into outer, middle, inner, and old harbors.

Winds—Weather.—In winter, the prevailing winds are from the NW and SW and they infrequently attain gale force. Considerable variations in the prevailing winds are caused by land breezes and the topography.

Tides—Currents.—The tidal range is negligible, being only 0.3m at springs. The wind direction can account for differences in the harbor water level which may be as much as 0.6m.

The currents are strongly influenced by the winds. Off the harbor, the current sets S and SW with a rate of 0.8 knot, increasing in strength with W and NW winds which may also cause a heavy scend to enter the harbor.

Depths—Limitations.—A controlling depth of 13.5m (1988) exists in the entrance fairway.



BENGHAZI LIGHT STRUCTURE

The main facilities include Rasif Libya Nos. 1, 2, and 3 quays which are, respectively, 46m, 137m, and 128m, long, each with a depth of 5.5m alongside; Outer Harbor Quays Nos. 1, 2, and 3 which are, respectively, 320m, 290m, and 168m long, each with a depth of 9m alongside; and a tanker berth, 107m long, with a depth of 8m alongside.

There are facilities for ro-ro, general cargo, container, and tanker vessels. Vessels up to 168m in length and 8.5m draft can be accommodated.

It is reported (1993) that extensive reclamation and development have been carried out within the port and quays with depths of 10 to 12m alongside have been constructed. The local authorities should be consulted for the latest information concerning depths at these new facilities.

Aspect.—A main light is shown from a water tower, 22m high, standing in a cemetery, 200m NE of the root of the N breakwater. A directional light, indicating the harbor entrance, is shown from a structure standing on the elbow of the N breakwater.

Conspicuous landmarks include an old and disused lighthouse, 33m high, standing 0.1 mile NW of the main light; the cathedral, surmounted by two domes, situated on the waterfront 0.7 mile SSW of the main light; a minaret, 33m high, standing 0.2 mile SW of the main light; the Manaar Palace and the Hilton Hotel standing near the waterfront 0.5 mile SSW of the main light.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and generally board about 0.5 mile seaward of the harbor entrance. Vessels should send an ETA 48 hours in advance.

Anchorage.—Exposed anchorage is available in a designated area, which may best be seen on the chart, lying centered 4 miles NW of the head of the N breakwater. Strong W winds cause a very heavy sea which renders this roadstead dangerous and during the winter it is seldom used.

Directions.—Vessels approaching the port from the SW should remain 2 to 3 miles offshore until near the harbor in order to avoid the coastal shoals. Vessels approaching from the N should, in thick weather, make their landfall to the NE of the harbor as the landmarks are more prominent than those to the SW of the port and there are no dangers more than 2.5 miles offshore.

Caution.—Several chartered dangers lie in the approaches to the harbor and may best be seen on the chart.

Due to the existence of submarine cables, an anchoring and fishing prohibited area, which may best be seen on the chart, lies close S of the harbor entrance and extends up to 6 miles from the shore.

Several disused submarine cables extend seaward from the vicinity of the root of the N breakwater and may best be seen on the chart.

Banghazi to Marsa Tubruq

1.15 Banghazi Petroleum Terminal (32°11'N., 20°05.1'E.) is situated 4.3 miles NE of the port of Banghazi and 0.3 mile SW of Al Minqar al Kabir (Mengar es-Seghir). It consists of a jetty which extends about 1 mile NW from the shore and has two berthing platforms.

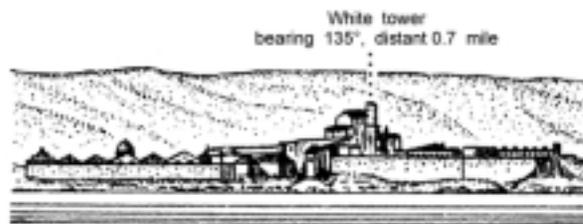
The first platform, at the head, has a depth of 15m alongside and can accommodate vessels of 1,000 to 50,000 dwt. The second platform, situated 650m from the shore, can accommodate vessels of 500 to 5,000 dwt.

A power station, with three prominent chimneys, stands 2 miles NE of Al Minqar al Kabir. A lighted buoy is moored close offshore in this vicinity and marks the seaward end of a water intake pipe.

Sidi Suwaykir Marabout (32°20'N., 20°17'E.), a small white building, is situated 17 miles NE of Banghazi. A main light is shown from a tower, 15m high, standing close W of the marabout.

Driana Point, low and inconspicuous, is located 4.5 miles NE of this light. Driana Reef, with depths of 4 to 9m, extends

up to 7 miles NE of the point and 2.5 miles offshore. Kawn al Asal, 350m high, stands 9 miles E of Driana Point and is prominent from seaward.



TUKRAH FROM NW

Tukrah (32°32'N., 20°34'E.), a walled coastal village, is situated 36 miles NE Banghazi. It has the appearance of a small fortified town and is conspicuous from seaward.

A conspicuous fort is situated 3.5 miles E of Tukrah and a radio mast, 61m high, stands close SW of it.

Tulmaythah (32°43'N., 20°57'E.), a coastal village, is backed by hills. A main light is shown from a tower, 16m high, standing at the W side of the village. A conspicuous water tower is situated 0.4 mile SSW of the light.

Anchorage can be taken in the small and exposed roadstead off the village. Good holding ground of sand can be found in a depth of 18m, about 0.5 mile NW of the light.

Several reefs front the coast and extend up to about 2 miles from the shore to the SW of this village.

Al Haniyah (32°51'N., 21°31'E.), a coastal village, is situated amongst several sandhills which are surmounted by prominent forts. Anchorage can be taken, by small craft, in the entrance to a sandy cove which is entered 1 mile SW of the village. Local knowledge is required and shelter from S winds is afforded. Larger vessels can anchor off the entrance over a sandy bottom.

Between Al Haniyah and Ras al Hamamah, 7.5 miles NE, several sandy coves indent the low and rocky coast, but they afford no shelter.

Sidi Abd ad Daien, a white marabout with a prominent dome, stands 5 miles NE of Al Haniyah, but is hidden by a sand dune when on a SE bearing. Ras al Hamamah, a promontory, may be identified by the ruins of a fort which stand on it and by the mouth of a large cave.

Near Ras al Hamamah, the E current divides. One part continues E toward Ras al Hilal at an average rate of 0.5 knot, and then at a greater rate approaching Ras at Tin; the other branch of the current turns SW at Ras al Hamamah toward Banghazi. The initial rate of the current is very slight, but becomes stronger as it travels SW and may reach a rate of 1 to 2 knots, depending on the strength of the winds.

Ras Amir (32°56'N., 21°22.5'E.) is located 4 miles NE of Ras al Hamamah. A main light is shown from a structure, 11m high, standing on this point. The wreck of a floating dock lies stranded on the beach 2 miles WSW of the light and is conspicuous.

Between Ras Amir and Marsa Susah, 14 miles E, a narrow and rocky beach lies at the foot of some remarkable hills which

rise steeply to heights of over 200m and have a sea face like a wall, broken by deep ravines.

Marsa Susah (32°54'N., 21°58'E.) (World Port Index No. 45260), a small and conspicuous coastal town, is encircled by green vegetation and situated between two hills which are fortified by batteries. A group of columns, the remains of an ancient city, stand close E of the town.

Foul ground, with above-water rocks, extends up to 0.3 mile N and E of the town. A main light is shown from a prominent structure, 7m high, standing in the town. A conspicuous minaret and a conspicuous belfry are situated close SSE and close SW, respectively, of the light. A square and reddish stone fort backs the town.

A small wharf fronts the town. Anchorage, exposed to onshore winds, can be taken in depths of 10 to 18m, good holding ground, W of the light. Local knowledge is advisable.

An above-water rock, with a shallow rock close E, lies 2 miles ENE of the light. These rocks lie about 0.3 mile offshore and are both usually marked by breakers.

An aeronautical light is reported to be occasionally shown from a structure standing 3.5 miles S of the town.

Ras al Hilal (32°55.5'N., 22°11'E.), a moderately low point, is fronted by foul ground and rocky patches which extend up to 0.3 mile N and 0.2 mile E of it. A main light is shown from a structure, 12m high, standing on this point.

Marsa Al Hilal, an open bay, extends S from Ras al Hilal and large caves appear in its shores. A minaret and a tower, both conspicuous, stand 2.5 miles S and 0.8 mile SW, respectively, of the light.

A concrete pier, 91m long, extends from the head of the bay. This pier has depths of 5.2 to 7m alongside its outer part and its inner part shoals rapidly. A dolphin marks the outer end of several sunken blocks which lie off the pier head. Anchorage, sheltered from offshore winds, can be taken in this bay in depths of 11 to 18m, sand and weed, good holding ground.

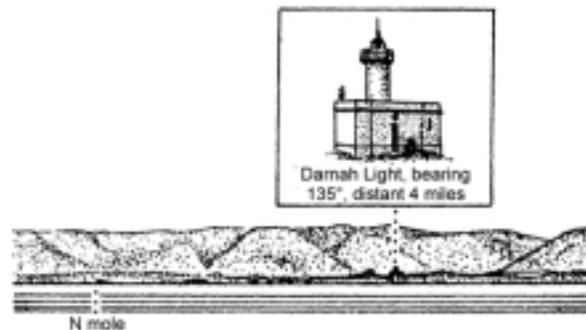
Jazirat Karissah (Isola Chersa) (32°51'N., 22°30'E.), a group of above and below-water rocks, is the outermost danger lying off the steep and rocky coast between Ras al Hilal and Darnah, 26 miles ESE. This group lies centered 2 miles offshore and a channel leads between it and the coast, but is not recommended.

An off-lying shoal, with a depth of 10.9m, is reported (1964) to lie about 10 miles NE of Jazirat Karissah.

Darnah Power Station (32°47'N., 22°35'E.) is situated close to the coast 3 miles WNW of Darnah. The main building, 32m high, appears as a light-colored rectangular block with dark bands at mid-height and at roof level. Four prominent chimneys, 47m high, stand close SW of the main building. Three large oil storage tanks are situated close W of the main building and a desalination plant is stands to the SE of the power station.

An oil discharging jetty extends 550m NE from the shore in the vicinity of the oil tanks and two mooring buoys are situated close to its head. Vessels secure stern-to the head of this jetty which has a depth of 11m alongside. There are no berths alongside the sides of the jetty and it is lighted along its whole length at night.

Ras Bu Azzah is located 3 miles ESE of the power station. A monument and a prominent disused light structure stand on the point and a conspicuous tower stands 1.5 miles SW of this point.



DARNAH FROM NW

1.16 Darnah (Derna) (32°46'N., 22°39'E.) (World Port Index No. 45240), a coastal town, stands near the mouth of Wadi Darnah (Uadi Darnah) which reaches the sea close SE of Ras Bu Azzah.

Tides—Currents.—The prevailing current off the port sets SE at a rate of 1 knot; however, both the direction and speed of the current may be changed by the winds.

Depths—Limitations.—The harbor is protected by two breakwaters and is subject to constant silting caused by large quantities of weed brought in by the current.

In 1984, the harbor entrance was dredged to a depth of 10m. The Old Quay, 120m long, has a depth of 6m alongside. In addition, new quays provide 950m of total berthage with depths of 8 to 9m alongside. There are facilities for general cargo, container, and bulk vessels. Vessels up to 18,000 dwt and 8.8m draft can be accommodated.

Aspect.—The river flows through a conspicuous ravine which cuts through the hills close NW of the harbor. Forts situated on either side of this ravine and a reservoir, which stands close to the W fort, are also very prominent. A main light is shown from a structure, 12m high, standing 1.8 miles SE of the harbor. A prominent radio mast, marked by a light, stands 1.7 miles S of the harbor.

Pilotage.—Pilotage is compulsory for all merchant vessels. Pilots can be contacted by VHF and board, during daylight hours only, close seaward of the breakwater heads.

Anchorage.—Anchorage is available within a designated area, which may best be seen on the chart, lying centered 3 miles NNW of the harbor.

Ras at Tin (32°38'N., 23°07'E.), formed by a low tongue of land, is located 25 miles ESE of Darnah and is fronted by rocks. A main light is shown from a structure, 7m high, standing on the point. Vessels should give this point a berth of at least 1.5 miles.

Off Ras at Tin, the current sets SW at a rate of 1 knot. Close offshore, the current follows the trend of the coast from N to S, at a rate of 0.25 to 0.5 knot, except between Jazirat Misratah

and Punta Bomba, where it sets NE because of shoals in the vicinity.

1.17 Gulf of Bomba (32°38'N., 23°07'E.) lies between Ras at Tin and Ras al Mahattah, 40 miles SSE. It contains several bays which are sheltered from the SW and NW winds. The shore of the gulf is low and sandy, and is backed by conspicuous high ground. A prominent tower stands on a plateau, 5.5 miles WNW of Ras at Tin.

Caution.—Mist occurs in the Gulf of Bomba during the morning hours. Refraction is also experienced along this coast.

Anchorage, sheltered from W winds, can be taken in a depth of 14m within Marsa Umm al Qarami, a bay, which lies 2.5 miles S of Ras at Tin. Currents at the anchorage set SW.

Melelao Bay lies between Punta Bomba, located 14 miles S of Ras at Tin, and Ras al Milh, 5.3 miles SSE. The latter point can be identified from offshore by a group of ruined houses. Shoals and rocks lie up to 2 miles offshore to the NE of Punta Bomba. Anchorage, sheltered from N winds, can be taken in a depth of 11m about 1.5 miles S of Punta Bomba. Currents at the anchorage set W.

Jazirat Bardaah, high and rocky, lies 5 miles ESE of Punta Bomba and is the most prominent island in the gulf.

Jazirat al Ulbah, a low island, lies 1.8 miles offshore, 12 miles SE of Punta Bomba. A shoal, with a depth of less than 9m, extends up to 1.2 miles NW of the island. Anchorage, sheltered from E winds, can be taken by small vessels with local knowledge in the channel lying to the W of the island.

Marsa as Sahl (32°08'N., 23°50'E.), located 5.3 miles ESE of Ras al Mahattah, is the most conspicuous of the numerous coves in this vicinity and can be identified by three large white patches on the coast. A remarkable cave, with a circular mouth rising to a height of 30m above the water, is located 2.5 miles E of Marsa as Sahl.

A white tomb, with a red dome, and the walls of the abandoned Forte Perrone stand 1.5 miles WSW and 0.5 mile SE, respectively, of Marsa al 'Awdah, which is located 6.5 miles ESE of Marsa as Sahl. Shoals extend up to 1 mile offshore in the vicinity of this latter point.

Minqar al Markab, located 4.5 miles ESE of Marsa al 'Awdah, is the N extremity of a headland. A shoal, with a least depth of 8m, lies about 1 mile ENE of this point.

A conspicuous long and white sand dune extends S from Minqar al Markab.

Punta Tobruk (32°04'N., 24°01'E.) is located 0.8 mile S of Minqar al Markab. A main light is shown from a structure, 5m high, standing on the point.

Marsa Tubruq (32°05'N., 23°59'E.)

World Port Index No. 45220 and 45225

1.18 Marsa Tubruq, a roomy inlet, is entered between Punta Tobruk and a point, 1.1 miles SSE. It extends 2 miles W and is sheltered from all winds except those from the E.

The port of Tubruq lines the N side of this inlet and its main harbor basin is protected by breakwaters.

Marsa Al Hariga Oil Terminal is situated on the S side of the inlet.

Winds.—Weather.—The prevailing W winds, which are usually light, may strengthen during the winter, but strong winds are infrequent. During spring and autumn, ghiblis, which are hot and dry desert winds, may blow from S to E at rates up to 50 knots.

Depths.—Limitations.—There are general depths of 14 to 18m in the entrance. The main commercial facilities in Tubruq include Quay No. 3, 25m long, with a depth of 3.5m alongside; and Quay No. 4 which has 416m of total berthage with depths of 6.5 to 9.2m alongside. Vessels up to 123m in length and 8.9m draft can be accommodated.

Marsa al Hariga Oil Terminal has a T-shaped jetty, 800m long, which is connected to the shore by an approach arm, 200m long. This jetty has two berths which are extended by dolphins and have a depth 18.3m alongside. In addition, an offshore berth, formed by several mooring buoys, lies close W of the jetty in a depth of 14.9m. Tankers up to 335m in length and 18.2m draft can be accommodated at the terminal.

Aspect.—The German War Memorial, a conspicuous yellow building with towers, is situated on the S side of the inlet, 2 miles SW of Punta Tubruq. A prominent group of oil tanks stands 0.5 miles SE of the memorial.

A main light is shown from a prominent structure standing 1.3 miles NW of Punta Tubruq.

Lighted buoys are moored about 0.5 mile SSE and 1 mile SE of Punta Tubruq. A lighted range and an unlighted beacon range, which may best be seen on the chart, are situated on the S side of the inlet and aid in the marking of the approach to the harbor and the oil terminal.

Pilotage.—Pilotage is compulsory. Pilots and oil terminal mooring masters can be contacted by VHF and board in the vicinity of the outer lighted buoy, about 1 mile SE of Punta Tubruq. Vessels should send an ETA 72 hours in advance.

Anchorage.—Anchorage is available within a designated area, which may best be seen on the chart, lying centered 1.5 miles E of Punta Tubruq.

Caution.—Several foul areas lie within the inlet and may best be seen on the chart.

Deep-draft vessels should pass to the S of the lighted buoy which is moored 0.5 mile SSE of Punta Tubruq.

A restricted area surrounds the oil terminal and may best be seen on the chart. Vessels are prohibited from entering this area without prior permission from the oil terminal.

Marsa Tubruq to the Egyptian Border

1.19 Marsa Umm ash Shawush (32°03'N., 24°01'E.), a small inlet, is entered close E of the S entrance point of Marsa Tubruq and is used by small craft.

An isolated shoal, with a depth of 9.8m, lies about 4 miles ESE of Tubruq Point.

Secca Ahal (Ahal Shoal), a shoal with a depth of 5.2m, lies about 2.5 miles offshore, 5.5 miles ESE of Tubruq Point.

Secca esc Sceich (Shiek Rocks), with a depth of 0.6m, lie about 1 mile offshore, 9 miles ESE of Tubruq Point. Foul ground lies between these rocks and the coast where there is a prominent cleft.

Ras Azzaz (31°58'N., 24°59'E.) is located 50 miles E of Punta Tubruq. A main light is shown from a structure, 11m high, standing on this point.

From Sheik Rocks to Ras Azzaz, the rocks and shoals fringing the coast lie within 1.5 miles of the shore.

Ras al Muraysah (31°55'N., 25°02'E.), located 4.5 miles SE of Ras Azzaz, is the W entrance point of the Khaliq as Sallum (Gulf of Sollum). Vessels, with local knowledge, can seek shelter from W winds and anchor in the roadstead of Marsa al Muraysah (Marsa el Mreisa), close S of the point.

Caution.—Vessels are recommended to give the coast between Ras Azzaz and Ras al Muraysah a wide berth as depths of less than 9m extend up to 0.8 mile offshore and the current here tends to set towards the shore.

Mina Bardiyah (31°46'N., 25°06'E.) (World Port Index No. 45210), a small and natural harbor, is entered close NW of Minqar Rai Ruhah, a point which rises to a height of 95m and is marked by a light. A prominent tower stands on the cliffs at the N side of the entrance. The village is mostly in ruins. This natural harbor provides sheltered anchorage for small craft. Anchorage outside the harbor entrance is obtainable in a depth of 42m, sand, about 0.5 mile ENE of the tower.

The coastal boundary between Libya and Egypt lies about 6.5 miles S of Mina Bardiyah.

Caution.—Unusual refraction and mirages occur in this vicinity, usually during periods when the ghibli, a hot dry wind, is blowing off the desert.